

Rocky Mountain Power Sustainable Transportation and Energy Plan (STEP)

Utah Public Utilities, Energy, and Technology Committee
June 19, 2019



STEP Update

- **Coal Risk Mitigation Fund / DSM Accounting Change** – Manages customer rate impacts of early closure of certain coal plants due to federal regulations
 - Cholla 4 (Arizona) and Craig 1 (Colorado) units announced early shutdown
- **Energy Balancing Account (EBA)** – Aligns variable cost recovery to be dollar for dollar like other energy providers across the country – electric and gas
- **Renewable Energy Tariff** – Allows large customers the choice in selecting renewable energy to achieve corporate sustainability goals up to 100% net renewable (no subsidy)
 - Commission approved the program
 - Economic development tool assisted Utah in recruitment of Facebook to Eagle Mountain
- **STEP Pilot Programs**
 - Electric vehicle charging infrastructure program
 - Commercial line incentives for businesses
 - Curtailment of Gadsby Plant emissions during periods of air quality alerts
 - Clean Coal research programs
 - Investigate and implement new technologies

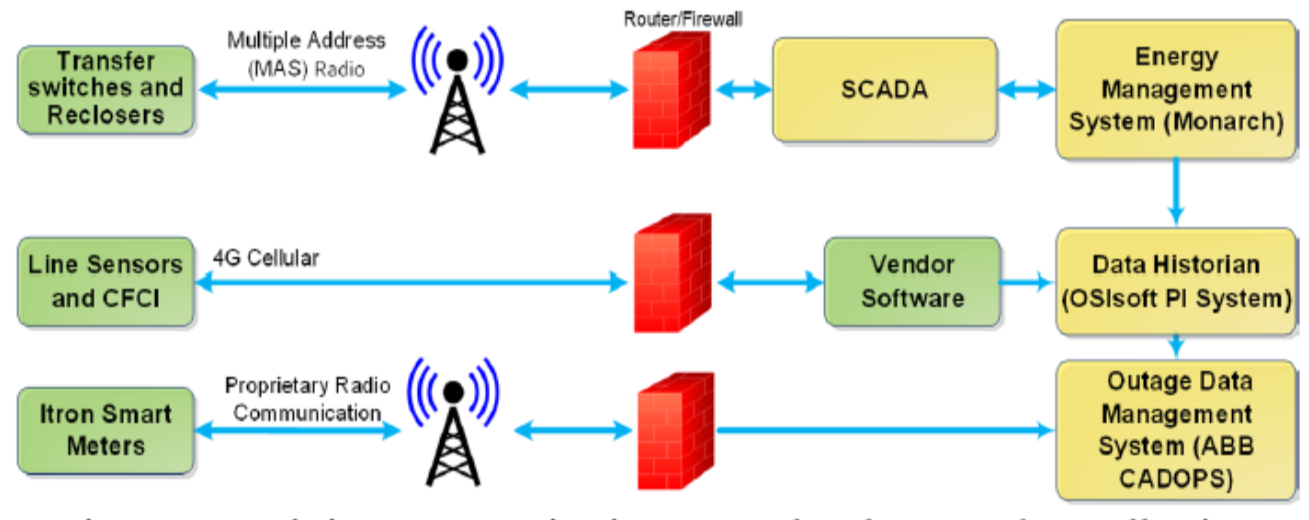
Clean Coal Research

- **Neural net optimization software on Huntington**
 - Combustion Optimization System has successfully reduced NOx emissions.
 - Expanding deployment of software due to success.
- **Cryogenic Carbon Capture technology at Hunter**
 - Working with Provo-based Sustainable Energy Solutions to capture carbon dioxide.
 - SES is leveraging work for DOE funding to expand test.
- **Biomass test burn at Hunter**
 - Testing the burning of processed woody material at Hunter.
 - The goal is to find a use for woody material to reduce wildfire risk.



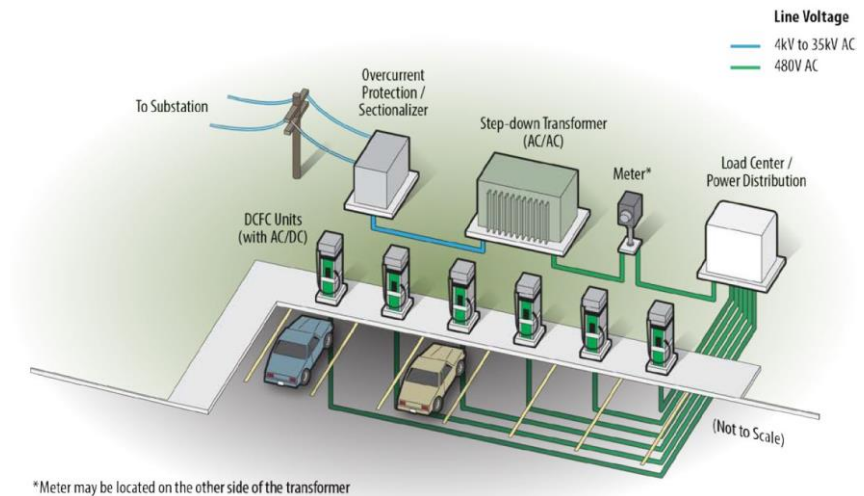
Proposed Project-ARMS

- Advanced Resiliency Management System (ARMS) for critical infrastructure like first responders
- Deploy advanced line sensor technology on distribution circuits
- Provides a platform for future Smart Grid applications



Proposed Project - Intermodal Hub

- Work with Utah State University to develop artificial intelligence software
- Develop Advanced Control System to manage power flow between multiple applications at same site
- Prevents super peaks and increases utilization



Source: INL

STEP Program Funding

2018 Annual STEP Status Report
STEP and USIP Accounting
CY 2018

Page No.	CY 2017	CY 2018												CY 2018 Total	2017-2018 Cumulative Total	
		Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18			
	STEP Account Beginning Balance	(15,850,031)	(19,887,838)	(20,001,319)	(20,131,002)	(20,294,033)	(19,516,302)	(19,884,359)	(20,770,408)	(21,356,634)	(22,093,157)	(22,644,936)	(23,246,309)	(23,526,285)	(19,887,838)	(15,850,031)
	Spending by Project:															
2.0	EV Charge Infrastructure	487,502	29,303	96,194	63,785	494,558	129,900	78,886	432,161	138,221	196,348	58,301	96,300	67,746	1,881,703	2,369,205
3.0	Woody-waste Co-Fire Biomass at Hunter Unit 3	-	-	-	-	69,024	-	(6,000)	-	19,425	-	-	77,112	70,716	230,277	230,277
4.0	NOx Neural Network Implementation	457,787	(9,232)	35,332	17,062	-	13,050	(26,101)	52,202	(13,053)	58,891	47,152	-	32,292	207,616	665,383
5.0	Alternative NOx Reductor	131,406	7,000	-	3,500	24,500	-	(8,990)	-	-	-	-	-	-	26,010	157,415
6.0	CO2 Enhanced Coal Bed Methane (CO2 Reduction)	-	19,250	8,250	2,750	24,750	-	-	27,500	-	-	2,750	8,779	-	94,029	94,029
7.0	Cryogenic Carbon Capture (Emerging CO2 Capture)	160,451	-	211,316	-	-	75,724	-	-	218,008	-	-	25,241	-	530,289	690,740
8.0	CARBONsafe (CO2 Sequestration Site Characterization)	150,239	-	-	-	-	-	-	-	-	-	-	-	-	-	150,239
9.0	Solar Thermal Assessment (Grid Performance)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.0	Circuit Performance Meters (Substation Metering)	13,678	1,191	906	-	12,237	79,026	13,767	4,062	3,522	67,599	150,364	44,598	50,076	427,349	441,025
11.0	Commercial Line Extension	-	-	-	-	-	43,334	-	-	-	-	-	26,006	-	69,340	69,340
12.0	Gadsby Emissions Curtailment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.0	Panguitch Solar and Energy Storage Project	331,995	30,181	5,825	5,688	6,182	25,512	31,897	-	37,607	16,976	(74,373)	(19,073)	51	75,474	407,470
14.0	Microgrid Project	-	-	400	448	89,246	90	-	-	351	179	-	-	-	90,713	90,713
15.0	Smart Inverter Project	-	-	1,203	254,193	114,895	4,645	2,163	1,074	1,668	358	358	806	2,297	383,659	383,659
16.0	Utah Solar Incentive Program	4,735,412	919,754	610,471	273,503	422,453	60,974	10,560	147,515	149,676	266,614	101,229	279,064	256,469	3,478,682	8,214,094
	Total Spending	6,488,448	1,006,448	969,697	620,948	1,257,646	432,254	96,162	664,514	555,824	607,167	285,761	538,633	450,647	7,405,340	13,963,787
	Surcharge Collections	(9,756,984)	(1,050,014)	(1,027,088)	(712,970)	(410,018)	(738,745)	(913,238)	(1,179,070)	(1,218,426)	(1,082,835)	(809,079)	(739,237)	(845,240)	(10,725,962)	(20,482,947)
	Ending Monthly Balance before Carrying Charge	(19,138,568)	(19,931,403)	(20,958,511)	(20,223,024)	(19,446,205)	(19,622,792)	(20,791,416)	(21,264,964)	(22,019,237)	(22,568,625)	(23,168,235)	(23,446,712)	(23,911,879)	(23,116,480)	(22,369,190)
	Carrying Charge	(749,270)	(69,916)	(72,491)	(71,009)	(70,096)	(61,567)	(68,993)	(71,669)	(73,620)	(76,111)	(78,073)	(79,573)	(80,843)	(674,261)	(1,623,531)
	Ending Monthly Balance	(19,887,838)	(20,001,319)	(20,131,002)	(20,294,033)	(19,516,302)	(19,884,359)	(20,770,408)	(21,356,634)	(22,093,157)	(22,644,936)	(23,246,309)	(23,526,285)	(23,992,721)	(23,992,721)	(23,992,721)